

REMARKS/ARGUMENTS

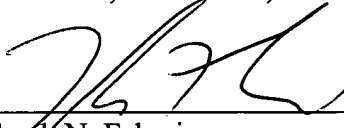
Reconsideration of this application, as amended, is respectfully requested. Claim 23 has been amended to positively recite that the non-uniform density of energy states of the material forming the island are characterized by separated conduction and valence bands that behave as continuous energy bands. Accordingly, claim 23 and its dependent claims are patentable over Luryi et al.

The decision on appeal affirmed the previous rejection of the claims because the Board believed that the claims did not positively recite the above-described feature. The present amendments have cured this problem. It remains undisputed that Luryi describes a device that includes a quantum well. See, e.g., Office Action dated Dec. 6, 2001, at page 2, paragraph 6. That is, the device described by Luryi relies upon the quantum nature of the well for its operating characteristics.

In contrast, the presently claimed invention relates to a device having a non-uniform density of energy states. That is, a device in which separated conduction and valiance bands behave as continuous, and not quantum, energy bands. This is a fundamental and important distinction between the present invention and the device described by Luryi.

If there are any additional charges, please charge Deposit Account No. 02-2666. If a telephone interview would in any way expedite the prosecution of the present application, the Examiner is invited to contact Tarek Fahmi at (408) 947-8200 ext. 204.

Respectfully submitted,
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